

USSN 10/555,857
Docket No.: SGK-028**REMARKS**

Applicants received Office Communication dated August 3, 2010 which stated that the reply filed June 4, 2010 is not fully responsive to the February 5, 2010 Non-Final Office Action ("Office Action"). Present amendments and remarks are believed to be fully responsive to the Office Action.

Claims 1-28 were previously canceled. Presently, Claim 29-50, 52, 58, and 61-66 are canceled, Claims 51, 55, 59, and 60 are amended, and Claim 67 is added. Accordingly, Claims 51, 53-57, 59, 60, and 67 are pending in this application.

Election/Restriction

The Examiner found that Claims 51-66 were constructively elected and withdrew Claims 29-50 from consideration as being directed to non-elected matter. Without addressing propriety of this action, Applicants canceled Claims 29-50 for the purpose of expediting prosecution.

Claim Interpretations

The Examiner construed limitations in the claims at issue such as "as a binder component" and "to help improve the film forming properties of the binder" as mere recitations of an intended use. Applicants have not further addressed this issue in this Response, because it is respectfully submitted that the amendments and remarks submitted herein render this issue moot.

Claim Rejections Under 35 U.S.C. § 102(b) Over Slater

Claims 58, 59, 61, 63, and 65 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,331,074 ("Slater").

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Claims 58, 61, 63, and 65 are canceled and, therefore, the rejection of these claims is moot.

Amended Claim 59 is directed to a hydrolysable paint composition according to Claim 51 wherein the paint composition includes an antifoulant. Slater discloses silicone rubber coatings formed by mixing of polydiorganosiloxane (A), a cross-linking agent (B), and an alpha-omega dihydroxypolydiorganosiloxane (C). The Examiner stated, *inter alia*, that the organosilyl esters of Slater are hydrolysable as disclosed in column 2, lines 6-8 of Slater. The Examiner also stated that the organopolysiloxane of Slater is hydrolysable as disclosed in column 3, lines 11-13 and column 7, lines 11-15 of Slater.

Applicants respectfully disagree with Examiner's observations. Although the cross-linking agent (B) in Slater has two hydrolysable groups per molecule, the final paint composition product disclosed in Slater itself is not described as hydrolysable. In fact, the cross-linking agent is hydrolysable so as to cross link the composition to form a cross-linked elastomer which cannot therefore itself be hydrolysable. Therefore, the paint composition of Slater is not hydrolysable. To the contrary, Slater describes the silicon rubber compositions of Slater as being advantageous over "conventional antifouling compositions containing marine biocides which are gradually leached from the paint. The silicone rubber coatings rely on their low surface energy, rather than on biocides, to inhibit settlement of marine organisms". Slater at col. 1, lines 16-28. The "conventional antifouling compositions" described by Slater include hydrolysable paint compositions which are rendered hydrolysable so that the biocide is leached out. Therefore, Slater does not relate to hydrolysable paint compositions but rather to cross-linking agents containing hydrolysable groups. These groups are reacted on curing to cross-link the elastomer. Accordingly, withdrawal of this anticipation rejection is respectfully requested.

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Docket No.: SGK-028**Claim Rejections Under 35 U.S.C. § 102(b) Over Tsutsumi**

Claims 51, 54, and 56 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 6,031,019 ("Tsutsumi").

Amended Claim 51 is directed to a hydrolysable paint composition comprising silylesters of monocarboxylic, sulphonic or phosphoric acid other than rosin as a binder component of the binder system wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon and wherein the composition includes a co-binder. Thus, the composition of Claim 51 has a feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon."

Tsutsumi discloses inks for ink-jet printing. The silyl esters disclosed in Tsutsumi are unsaturated. *See* Tsutsumi at col. 5, lines 35-40. Accordingly, Tsutsumi does not disclose composition of Claim 51 and withdrawal of the anticipation rejection over Tsutsumi is respectfully requested.

Claims 54 and 56 depend on Claim 51 and, therefore, also have the feature of Claim 51 "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon." Accordingly, Claims 54 and 56 are not anticipated by Tsutsumi for the same reasons as those presented above with respect to Claim 51. Withdrawal of the anticipation rejection of Claims 54 and 56 over Tsutsumi is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102(b) Over Itoh

Claims 58, 59, 63, 65, and 66 were rejected under 35 U.S.C. § 102(b) as anticipated by U.S. Patent No. 5,795,374 ("Itoh").

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Claims 58, 63, 65, and 66 are canceled and, therefore, the rejection of these claims is moot.

Claim 59 is directed to a hydrolysable paint composition according to Claim 51, wherein the paint composition includes an antifoulant.

Itoh discloses coating composition comprising a polymer containing organosilyl ester groups. The silyl ester of Itoh is defined by formula (I) in which X is always unsaturated at the alpha carbon. See Itoh at col. 4, lines 35-53; col. 5, lines 26-38; and col. 9, Table 1. Claim 59 depends on Claim 51 and, therefore, also has the feature of Claim 51 "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon." Accordingly, Itoh does not disclose composition of Claim 59 and withdrawal of this anticipation rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a) Over Slater

Claim 62 was rejected under 35 U.S.C. § 103(a) as obvious over Slater. Claims 62 is canceled and, therefore, the rejection of this claim is moot.

Claim Rejections Under 35 U.S.C. § 103(a) Over Tsutsumi

Claims 53 and 55 were rejected under 35 U.S.C. § 103(a) as obvious over Tsutsumi.

Claim 53 is directed to a paint composition according to Claim 51 which comprises a mixture of the silylesters. Claim 55 is directed to a composition according to Claim 51 with specified co-binder. Thus, Claims 53 and 55 depend on Claim 51.

As discussed above, the amended Claim 51 has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon," which is not disclosed in Tsutsumi. There is no motivation for a person having ordinary skill in the art

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to modify the compositions of Tsutsumi to have a saturated alpha carbon. In the compounds of formula (4) in Tsutsumi, X is disclosed as "a polymerisable unsaturated group." Tsutsumi at col. 4, lines 55-61. The disclosed compounds, such as compounds of formula (4-2) therefore have an unsaturated alpha carbon for this purpose. Thus, a person having ordinary skill in the art would have had no motivation to modify compounds of Tsutsumi to have a saturated alpha carbon because saturated alpha carbon does not provide a polymerisable unsaturated group. Accordingly, Claims 53 and 55, which depend on Claim 51, are not obvious over Tsutsumi and withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a) Over Tsutsumi In View Of Grueninger And Healy

Claim 57 was rejected under 35 U.S.C. § 103(a) as obvious over Tsutsumi as applied to Claim 51 in view of U.S. Patent No. 4,108,812 ("Grueninger") as evidenced by U.S. Patent No. 6,284,031 ("Healy").

Claim 57 is directed to a paint composition according to Claim 51 wherein the binder incorporates abietyl dimmers to help improve the film forming properties of the binder.

The Examiner stated that Tsutsumi discloses adding various conventional additives to their ink compositions but not abietyl dimmers and that this omission is complimented by the disclosure of Grueninger and Healy.

As discussed above, the amended Claim 51 has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon," which is not disclosed in Tsutsumi. As discussed above, there is no motivation for a person having ordinary skill in the art to modify the compositions of Tsutsumi to have a saturated alpha carbon. Neither Grueninger nor Healy provide such motivation. Accordingly, Claim 57, which depends

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on Claim 51, is not obvious over Tsutsumi and withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a) Over Itoh In View Of Plehiers

Claims 51 and 53-57 were rejected under 35 U.S.C. § 103(a) as obvious over Itoh in view of PCT publication WO 02/094838 ("Plehiers").

The Examiner stated that Itoh does not disclose silyl esters in combination with a co-binder but that Plehiers provides such disclosure. However, as discussed above, the amended Claim 51 has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon," which is not disclosed in Itoh. There is no motivation for a person having ordinary skill in the art to modify the compositions of Itoh to have a saturated alpha carbon. Plehiers does not provide such motivation. Accordingly, Claim 51 and Claims 53-57, which depend on Claim 51, are not obvious over Itoh in view of Plehiers and withdrawal of this rejection is respectfully requested.

Claims 60 and 62-64 were rejected under 35 U.S.C. § 103(a) as obvious over Itoh in view of Plehiers.

Claims 62-64 are canceled and, therefore, the rejection of these claims is moot.

Claim 60 is directed to a hydrolysable paint composition according to Claim 51 wherein the co-binder is selected from tri-organosilyl(meth)acrylate copolymers. However, as discussed above, the amended Claim 51 has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon," which is not disclosed in Itoh. There is no motivation for a person having ordinary skill in the art to modify the compositions of Itoh to have a saturated alpha carbon. Plehiers does not provide such motivation. Accordingly,

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Claim 60, which depends on Claim 51, is not obvious over Itoh in view of Plehiers and withdrawal of this rejection is respectfully requested.

Claim Rejections Under 35 U.S.C. § 103(a) Over Shimakura In View Of Van Ooij

Claims 51-54 were rejected under 35 U.S.C. § 103(a) as obvious over PCT publication WO 2002/031065 in view of PCT publication WO 2001/06036 ("Van Ooij"). The Examiner stated that US 2004/0009300 ("Shimakura") is being used as an English language equivalent of WO 2002/031065 since it is a U.S. national stage entry of this PCT application.

Claim 52 is canceled and, therefore, the rejection of this claim is moot.

The disclosure of Shimakura relates to the coating of metallic strips, in particular, in relation to vehicle construction. Shimakura at [0001]. Clearly, the hydrolysable coatings of the present invention would be inappropriate in land vehicles.

Silanes are listed in Shimakura as potential additives but are not exemplified to any significant extent. Acyloxysilanes are mentioned in extensive and generalised lists. *Id.* at [0055], [0112], [0144]-[0164]. However, only one silane, a glycidylxypropyltrimethoxysilane, appears to be exemplified in "Inventive Example 8." *Id.* at [0291]-[0292]. Therefore, Shimakura provides little guidance to a person having ordinary skill in the art on the use of the silyl esters of the present invention where they are used to improve alkaline hydrolysis or to boost erodability. Furthermore, in the context of vehicles, alkaline hydrolysis or erodability may be seen as an undesirable characteristic. Therefore, a person having ordinary skill in the art looking to improve the alkaline hydrolysis or erodability in a hydrolysable paint composition is unlikely to look in the field of vehicle coatings such as automobile coatings.

Furthermore, Shimakura gives no teaching that implies any particular advantage in the use of acyloxysilanes of the present invention even in relation to the taught adhesion

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improvement. The Examiner stated that Shimakura teaches that their silanes are added to prevent corrosion and cited paragraph [0026] of Shimakura. Applicants respectfully disagree with this reading of paragraph [0026] of Shimakura, which states that “[i]n addition to the abovementioned constituents it may comprise where appropriate at least one organic solvent, **where appropriate at least one silane and/or siloxane calculated as silane, where appropriate at least one corrosion inhibitor**, and where appropriate at least one chromium(VI) compound.” (emphasis added) Paragraph [0026] lists silanes and a corrosion inhibitor as separate constituents. There is no disclosure in this paragraph that silanes can be used to prevent corrosion. Silanes are taught in Shimakura as adhesion improvers only which is not relevant to the improvement of erodability or alkaline hydrolysis of the present invention. Shimakura at [0055].

Therefore, a person having ordinary skill in the art looking for materials which will improve the erodability or alkaline hydrolysis of a hydrolysable paint composition would not have found any useful teaching in Shimakura or Ooij in this regard. At best, a person having ordinary skill in the art may have considered the disclosures in relation to silanes as providing interesting information on the general adhesion promoting properties of silanes in the compositions disclosed. There is no particular disclosure in Shimakura or Ooij directing a person having ordinary skill in the art to select out silyl esters of certain acids.

Furthermore, a person having ordinary skill in the art would have found no teaching in Ooij to select the silyl esters of the present invention because the specific silanes of Ooij do not fall within formula I. The Examiner stated that Ooij discloses bis-(triacetoxysilyl)ethane, which meets formula I of Claim 54 of the present invention. Applicants respectfully disagree with this conclusion. To encompass bis-(triacetoxysilyl)ethane, one of R^1 , R^2 , or R^3 of formula I of Claim

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54 would need to be an alkylsilyltriacetoxyl group, which does not fall within the definitions of R^1 , R^2 , or R^3 of formula I. Furthermore, R^1 , R^2 , or R^3 cannot be an acetoxyl group because R^7 and R^8 are never allowed to be methyl. Thus, there is no guidance in Ooij to choose silyl ester additives that fall within the present invention.

Still further, the compositions of Ooij are merely aqueous film solutions and are not paint compositions having co-binders. Furthermore, the examples of Ooij relate to silanes with a vinyl group which means that they are unsaturated at the alpha carbon. Such compounds are excluded from the scope of the amended Claim 1 which has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon." Accordingly, a person having ordinary skill in the art would have received no guidance from Ooij to select the silyl esters of the present invention.

There is no teaching on how a silane of Ooij may behave in the binder systems of the present invention or in the binder systems with a co-binder or in a hydrolysable system. Furthermore, the binder system of Shimakura does not relate to silylesters of acids and there is no indication of the use of a co-binder. Accordingly, a person having ordinary skill in the art would not have been able to predict the improved alkaline hydrolysis properties and erodability boosting properties of the compositions of the present invention from the disclosures of Shimakura or Ooij.

Double Patenting

Claims 58, 59, 62, and 63 were provisionally rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over Claims 1-3, 8-13, and 17-52 of copending U.S. Application Serial No. 11/726,130.

Claims 58, 62, and 63 are canceled and, therefore, the rejection of these claim is moot.

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U.S. Application Serial No. 11/726,130 issued as U.S. Patent No. 7,736,634 ("the '634 patent"), which is directed to compounds that are unsaturated at the alpha carbon. As stated above, amended Claim 51 has the feature "wherein the carboxylic, sulphonic or phosphoric acid part of the organosilyl ester is saturated at the alpha carbon." Accordingly, the pending claims are patentably distinct from the claims of the '634 patent and withdrawal of this rejection is respectfully requested.

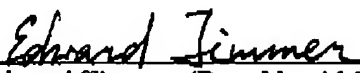
CONCLUSION

Applicants respectfully submit that the application is now in proper form for favorable consideration and allowance. The Examiner is invited to contact the undersigned attorney for Applicant to discuss any outstanding issues.

The Commissioner is authorized to charge any required fees, including any extension and/or excess claim fees, any additional fees, or credit any overpayment, to Goodwin Procter LLP Deposit Account No. 06-0923.

Respectfully submitted for Applicants,

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Edward Timmer (Reg. No. 46,248)
GOODWIN PROCTER LLP
The New York Times Building
620 Eighth Avenue
New York, NY 10018-1405
(212) 459-7247; (212) 813-8800